

FILE 'HOME' ENTERED AT 15:51:05 ON 22 APR 2008

=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDHS, BIOTECHNO, CABA, CAPLUS,
CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 15:51:17 ON 22 APR 2008

69 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> silk and chloroform and hydrogel
1 FILE CAPLUS
1 FILE IFIPAT
419 FILE USPATFULL
75 FILE USPAT2

65 FILES SEARCHED...

1 FILE WPIDS
1 FILE WPINDEX

6 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L1 QUE SILK AND CHLOROFORM AND HYDROGEL

=> silk and hexane and hydrogel
1 FILE CAPLUS
3 FILE IFIPAT
395 FILE USPATFULL
103 FILE USPAT2
2 FILE WPIDS
2 FILE WPINDEX

6 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L2 QUE SILK AND HEXANE AND HYDROGEL

=> silk and iso-amyl and hydrogel
1 FILE CAPLUS
1 FILE IFIPAT
60 FILES SEARCHED...
27 FILE USPATFULL
10 FILE USPAT2
1 FILE WPIDS
1 FILE WPINDEX

6 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L3 QUE SILK AND ISO-AMYL AND HYDROGEL

=> silk or collagens or keratins or actins or chorions or seroins
12 FILE ADISCTI
6 FILE ADISINSIGHT
4 FILE ADISNEWS
2724 FILE AGRICOLA

228 FILE ANABSTR
453 FILE ANTE
49 FILE AQUALINE
527 FILE AQUASCI
1024 FILE BIOENG
18068 FILE BIOSIS
1341 FILE BIOTECHABS
1341 FILE BIOTECHDS
3464 FILE BIOTECHNO
4815 FILE CABA
149058 FILE CAPLUS
247 FILE CEABA-VTB
562 FILE CIN
325 FILE CONFSCI
56 FILE CROPB
232 FILE CROPU
63 FILE DDFB
209 FILE DDFU
4875 FILE DGENE
1034 FILE DISSABS
63 FILE DRUGB
13 FILE DRUGMONOG2
457 FILE DRUGU
95 FILE EMBAL
10344 FILE EMBASE
4734 FILE ESBIOBASE
30 FILE FOMAD
6 FILE FOREGE
200 FILE FROSTI
441 FILE FSTA
55136 FILE GENBANK
28 FILE HEALSAFE
6961 FILE IFIPAT
1 FILE IMSDRUGNEWS
10 FILE IMSPRODUCT
1 FILE IMSRESEARCH
1226 FILE KOSMET
4097 FILE LIFESCI
61355 FILE MEDLINE
505 FILE NTIS
7 FILE NUTRACEUT
132 FILE OCEAN
10953 FILE PASCAL
47 FILES SEARCHED...
8 FILE PCTGEN
5 FILE PHAR
4 FILE PHARMAML
80 FILE PHIN
28344 FILE PROMT
10 FILE PROUSDDR
79 FILE RDISCLOSURE
13664 FILE SCISEARCH
10342 FILE TOXCENTER
2848 FILE USGENE
47620 FILE USPATFULL
29444 FILE USPATOLD
7155 FILE USPAT2
4 FILE VETB
17 FILE VETU
84 FILE WATER
17916 FILE WPIDS

325 FILE WPIFV
17916 FILE WPINDEX

66 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L4 QUE SILK OR COLLAGENS OR KERATINS OR ACTINS OR CHORIONS OR SEROINS

=> (iso-amyl with alcohol) or hexane or chloroform

3 FILE ADISCTI
17 FILE ADISINSIGHT
3 FILE ADISNEWS
3085 FILE AGRICOLA
15413 FILE ANABSTR
500 FILE ANTE
1737 FILE AQUALINE
1543 FILE AQUASCI
2710 FILE BIOENG
33058 FILE BIOSIS
7161 FILE BIOTECHABS
7161 FILE BIOTECHDS
3581 FILE BIOTECHNO
13323 FILE CABA
181199 FILE CAPLUS
4302 FILE CEABA-VTB
762 FILE CIN
388 FILE CONFSCI
144 FILE CROB
3492 FILE CROPU
1049 FILE DDFB
2844 FILE DDFU
673 FILE DGENE
2838 FILE DISSABS
1049 FILE DRUGB
205 FILE DRUGMONOG2
7271 FILE DRUGU
185 FILE EMBAL
22505 FILE EMBASE
8097 FILE ESBIOBASE

30 FILES SEARCHED...

162 FILE FOREGE
2249 FILE FROSTI
7830 FILE FSTA
409682 FILE GENBANK
512 FILE HEALSAFE
19300 FILE IFIPAT
35 FILE IMSPRODUCT
18 FILE IMSRESEARCH
221 FILE KOSMET
5684 FILE LIFESCI
20152 FILE MEDLINE
2512 FILE NTIS
2 FILE NUTRACEUT
311 FILE OCEAN
27703 FILE PASCAL

47 FILES SEARCHED...

21 FILE PHAR
3 FILE PHARMAML
29 FILE PHIN
3137 FILE PROMT
289 FILE PROUSSDR
17 FILE PS

447 FILE RDISCLOSURE
40539 FILE SCISEARCH
511 FILE SYNTHLINE
38913 FILE TOXCENTER
157 FILE USGENE
283319 FILE USPATFULL
57012 FILE USPATOLD
35179 FILE USPAT2
91 FILE VETB
555 FILE VETU
1956 FILE WATER
65736 FILE WPIDS
373 FILE WPIFV
68 FILES SEARCHED...
65736 FILE WPINDEX

65 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L5 QUE (ISO-AMYL WITH ALCOHOL) OR HEXANE OR CHLOROFORM

=> 13 and 14
1 FILE CAPLUS
1 FILE IFIPAT
47 FILES SEARCHED...
27 FILE USPATFULL
10 FILE USPAT2
1 FILE WPIDS
1 FILE WPINDEX

6 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L6 QUE L3 AND L4

=> 14 and 15
3 FILE AGRICOLA
3 FILE ANABSTR
1 FILE ANTE
1 FILE AQUASCI
8 FILE BIOENG
31 FILE BIOSIS
4 FILE BIOTECHABS
4 FILE BIOTECHDS
5 FILE BIOTECHNO
21 FILE CABA
464 FILE CAPLUS
1 FILE CIN
6 FILE CROPU
6 FILE DISSABS
25 FILES SEARCHED...
9 FILE EMBASE
5 FILE ESBIOBASE
1 FILE FROSTI
2 FILE FSTA
1 FILE GENBANK
57 FILE IFIPAT
1 FILE KOSMET
10 FILE LIFESCI
47 FILE MEDLINE
2 FILE NTIS
45 FILES SEARCHED...
8 FILE PASCAL

48 FILES SEARCHED...
14 FILE PROMT
20 FILE SCISEARCH
83 FILE TOXCENTER
7242 FILE USPATFULL
980 FILE USPATOLD
1192 FILE USPAT2
121 FILE WPIDS
1 FILE WPIFV
68 FILES SEARCHED...
121 FILE WPINDEX

34 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L7 QUE L4 AND L5

=> 16 and hydrogel
1 FILE CAPLUS
1 FILE IFIPAT
46 FILES SEARCHED...
27 FILE USPATFULL
10 FILE USPAT2
1 FILE WPIDS
1 FILE WPINDEX

6 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L8 QUE L6 AND HYDROGEL

=> d rank
F1 27 USPATFULL
F2 10 USPAT2
F3 1 CAPLUS
F4 1 IFIPAT
F5 1 WPIDS
F6 1 WPINDEX

=> file caplus ifipat wpids
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 9.10 9.31

FILE 'CAPLUS' ENTERED AT 15:59:35 ON 22 APR 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'IFIPAT' ENTERED AT 15:59:35 ON 22 APR 2008
COPYRIGHT (C) 2008 IFI CLAIMS(R) Patent Services (IFI)

FILE 'WPIDS' ENTERED AT 15:59:35 ON 22 APR 2008
COPYRIGHT (C) 2008 THE THOMSON CORPORATION

=> 16 and hydrogel
L9 3 L6 AND HYDROGEL

=> d ab bib 1-3

L9 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AB One aspect of the present invention relates to a method of preparing a

fibrous protein smectic hydrogel by way of a solvent templating process, comprising the steps of pouring an aqueous fibrous protein solution into

a container comprising a solvent that is not miscible with water; sealing the container and allowing it to age at about room temperature; and collecting the resulting fibrous protein smectic hydrogel and allowing it to dry. Another aspect of the present invention relates to a method of obtaining predominantly one enantiomer from a racemic mixture, comprising the steps of pouring an aqueous fibrous protein solution into a container comprising a solvent that is not miscible with water; sealing the container and allowing it to age at about room temperature; allowing the enantiomers of racemic mixture to diffuse selectively into the smectic hydrogel in solution; removing the smectic hydrogel from the solution; rinsing predominantly one enantiomer from the surface of the smectic hydrogel; and extracting predominantly one enantiomer from the interior of the smectic hydrogel. The present invention also relates to a smectic hydrogel prepared according to an aforementioned method.

AN 2004:412959 CAPLUS

DN 140:420370

TI Templated native silk smectic gels

IN Valluzzi, Regina; Jin, Hyoung-Joon; Park, Jaehyung

PA Trustees of Tufts College, USA

SO PCT Int. Appl., 66 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004041845	A2	20040521	WO 2003-US34684	20031031
	WO 2004041845	A3	20040902		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA	2504327	A1	20040521	CA 2003-2504327	20031031
AU	2003294240	A1	20040607	AU 2003-294240	20031031
EP	1565203	A2	20050824	EP 2003-789721	20031031
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN	1732014	A	20060208	CN 2003-8010979	20031031
JP	2006504852	T	20060209	JP 2004-550338	20031031
US	20060205927	A1	20060914	US 2005-533611	20050429
IN	2005CN01071	A	20070824	IN 2005-CN1071	20050531
PRAI	US 2002-423046P	P	20021101		
	WO 2003-US34684	W	20031031		

L9 ANSWER 2 OF 3 IFIPAT COPYRIGHT 2008 IFI on STN

AB One aspect of the present invention relates to a method of preparing a fibrous protein smectic hydrogel by way of a solvent templating process, comprising the steps of pouring an aqueous fibrous protein solution into a container comprising a solvent that is not miscible with water; sealing the container and allowing it to age at about room temperature; and collecting the resulting fibrous protein smectic

hydrogel and allowing it to dry. Another aspect of the present invention relates to a method of obtaining predominantly one enantiomer from a racemic mixture, comprising the steps of pouring an aqueous fibrous protein solution into a container comprising a solvent that is not miscible with water; sealing the container and allowing it to age at about room temperature; allowing the enantiomers of racemic mixture to diffuse selectively into the smectic hydrogel in solution; removing the smectic hydrogel from the solution; rinsing predominantly one enantiomer from the surface of the smectic hydrogel; and extracting predominantly one enantiomer from the interior of the smectic hydrogel. The present invention also relates to a smectic hydrogel prepared according to an aforementioned method.

AN 11256867 IFIPAT;IFIUDB;IFICDB
TI TEMPLATED NATIVE SILK SMECTIC GELS
INF Jin; Hyoung-Joon, Seoul, KR
Park; Jae-Hyung, Decatur, GA, US
Valluzzi; Regina, Cambridge, MA, US
IN Jin Hyoung-Joon (KR); Park Jae-Hyung; Valluzzi Regina
PAF Tufts University, 136 Harrison Avenue, Boston, MA, 02111, US
PA Tufts University Trustees of (86072)
AG FOLEY HOAG, LLP;PATENT GROUP, WORLD TRADE CENTER WEST, 155 SEAPORT BLVD, BOSTON, MA, 02110, US
PI US 2006205927 A1 20060914
AI US 2003-533611 20031031
WO 2003-US34684 20031031
20060511 PCT 371 date
20060511 PCT 102(e) date
PRAI US 2002-423046P 20021101 (Provisional)
FI US 2006205927 20060914
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
ED Entered STN: 15 Sep 2006
Last Updated on STN: 15 Sep 2006
GOVI The invention was made with support provided by NASA (grant NAG81699) and NSF (grant BES 9727401); therefore, the government has certain rights in the invention.
CLMN 48
GI 33 Figure(s).
FIG. 1 depicts the surface (right) and fracture surface of chloroform templated silk. The wavy texture is everywhere on the solvent templated side of the materials surface.
FIG. 2 depicts the chloroform templated film. Waves reorienting and becoming terraces can be seen, behavior which is not expected for simple wrinkles due to contraction.
FIG. 3 depicts a regular pattern of nubby small structures comprising the waves.
FIG. 4 depicts an amyl alcohol film showing a surface that looks like a "nonwoven woven" fabric.
FIG. 5 depicts a surface texture seen at an angle showing a thin layer very different from the chloroform films.
FIG. 6 depicts amyl alcohol templated samples soaked in bipyridyl trisRuII chloride hexahydrate giving a high magnification image and a 40 nm layered feature.
FIG. 7 depicts films after soaking in a dysprosium chloride solution for added contrast. The wavy layered structure of the chloroform templated film is apparent here.
FIG. 8 depicts a film's texture that is even and regular.
FIG. 9 depicts self-fabricated textured "tapes" from a peptide with sequence (Glu)5(Ser-Gly-Ala-Gly-Val-Gly-Arg-Gly-Asp-GlySer-GlyVal-Gly-Leu-

Gly-Ser-Gly-Asn-Gly)2(Glu)5. 1. Optical micrograph shows a 10-15 micron texture which persists through the material thickness. The material is optically transparent. 2. Polarizing optical microscopy reveals patterned birefringence, indicating that the topographic texture is due to a changing material orientation. 3. SEM image shows the topographic structure of the tape. The difference in periodicity observed in SEM and optical microscopy is due to the fact that top surface and bottom surface ridges are both observed in the optical image (resulting in an apparently shorter period).

FIG. 10 depicts self-fabricated tapes of (Glu)5(Ser-Gly-Ala-GlyVal-Gly-Arg-Gly-Asp-Gly-Ser-Gly-Val-Gly-Leu-Gly-Ser-Gly-Asn-Gly)2(Glu)5 have "patterns within patterns" or a long-range ordered structure consisting of hierarchical nanoscale to microscale patterns; 1: the self-limited width and thickness of the fibers (120 microns, 50 microns respectively) form the largest length scale in the hierarchy; a 40 micron periodic texture is observed running along the tape; 2: within the ridges of the 40 micron texture a 3 micron subtexture is observed; 3: a submicron texture of inclined sheets or layers can be observed (<40 nm, but exact size is below the resolution of the scanning electron microscope); TEM studies indicate a layer spacing of 5 nm.

FIG. 11 depicts an IR spectra of self-fabricated tapes of (Glu)5(Ser-Gly-Ala-Gly-Val-Gly-Arg-Gly-Asp-Gly-Ser-GlyVal-Gly-LeuGly-Ser-Gly-Asn-Gly)2(Glu)5. Typically IR spectra for molecules are seen as very small differences in IR transmission relative to a large background, which must be subtracted out. Raw data (no background subtraction) is shown for transmission FTIR spectra through different regions (orientations) of the tape structure. Two orientations show very typical protein absorbance spectra over a high background. However in some orientations the IR radiation does not reach the detector.

FIG. 12 depicts an IR spectrum modified by tape with scale expanded to show spectral features. Instead of an absorption or transmission spectrum, a pattern of 2 overlaid sinusoids (one has a 50/cm period, the other a 25/cm period. The effect for this material appears strongest in the 1750-3500 cm⁻¹, or 5.7-2.9 micron range.

FIG. 13 depicts twisted polycrystals obtained by salt precipitation of an oligopeptide with Na-EDTA.

FIG. 14 depicts ordered "corkscrew" polycrystalline oligopeptide salt precipitate as a hierarchy of twisted ordered structures.

FIG. 15 depicts reflection and transmission FTIR spectra for ordered polycrystals. TOP: reflection infrared spectrum, Raw data. A glassy disordered material of the oligopeptide is more reflective than the background. An ordered periodic nanolayered material from the same peptide is shown, and clearly reflects far less of the infrared radiation. BOTTOM: transmission spectra for background, unordered peptide material and a chemically identical nanolayered ordered material of the peptide. Spectrum is greatly attenuated for the ordered material.

FIG. 16 depicts ordered textured surfaces and interiors from templated gels (a) chloroform templated gels have a wavy surface texture covering the surfaces which were in contact with water; (b) a fracture surface from the chloroform templated gel reveals a "skin" of the wavy pattern, which forms channels down into the interior, the interior has a different structure, which appears to be made of wavy plates; (c) templated surface of amyl alcohol templated material (in contact with water); (d) higher magnification image of the edge of the region in c, showing a "skin" core structure and a patterned texture throughout the material; (e,f) amyl alcohol dried film after swelling in an aqueous solution of ruthenium compound and extraction of ruthenium compound by swelling in water; (e) wavy lines indicate reorientation of ordered structures within the material; (f) at high magnification (20, 000x) lines 38 nm in width are observed.

FIG. 17 depicts amyl alcohol templated gel after soaking in Aqueous

Tris(2,2'-bipyridyl) dichloro ruthenium(II) hexahydrate ("Rubipy") solution for 1 day. Much of the Rubipy has migrated from the solution into the silk gel. Initial migration is rapid and chirally selective (occurs over roughly 1 hour). Additional migration occurs slowly after this for roughly 1 day and is less chirally selective. Chloroform templated gels do not exhibit complex diffusion behavior and are chirally selective throughout the swelling process.

FIG. 18 depicts a cross section of amyl alcohol templated gel after swelling in Rubipy for 1 hour. The Rubipy penetrated rapidly into the outer "skin" layers of the gel (bright orange), and more slowly into the interior (yellowish region).

FIG. 19 depicts an X-ray diffraction pattern from chloroform templated gel. Dark arcs along the diffraction rings (arrow) indicate orientation.

FIG. 20 depicts the non-globular nature of fibrous proteins.

FIG. 21 depicts the long range order of liquid crystals.

FIG. 22 depicts "frustration" in nanolayered crystals.

FIG. 23 depicts nanocomposites.

FIG. 24 depicts banded structures from native silk.

FIG. 25 depicts banded structures from engineered protein designed peptide.

FIG. 26 depicts how hairpin structures allow silk liquid crystallinity.

FIG. 27 depicts spider silk modification.

FIG. 28 depicts amphiphilic spider silk motif.

FIG. 29 depicts silkworm silk peptide models.

FIG. 30 depicts film morphology and helix anchoring.

FIG. 31 depicts the templating-against-solvent technique.

FIG. 32 depicts patterned peptide films.

FIG. 33 depicts silk templated gels-surface "skin".

L9 ANSWER 3 OF 3 WPIDS COPYRIGHT 2008 THE THOMSON CORP on STN
AB WO 2004041845 A2 UPAB: 20060121

NOVELTY - Preparing a fibrous protein smectic hydrogel comprises:

(1) pouring an aqueous fibrous protein solution into a container comprising a solvent that is not miscible with water;

(2) sealing the container and allowing it to age at about room temperature; and

(3) collecting the resulting fibrous protein smectic hydrogel and allowing it to dry.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a method of obtaining predominantly one enantiomer from a racemic mixture.

USE - The method is useful in preparing a fibrous protein smectic hydrogel (claimed).

AN 2004-411501 [38] WPIDS
DNC C2004-154468 [38]

TI Preparing a fibrous protein smectic hydrogel by pouring an aqueous fibrous protein solution into a container, sealing the container and allowing it to age at room temperature and collecting and allowing to dry the resulting hydrogel

DC B04
IN JIN H; JIN H J; PARK J; VALLUZZI R
PA (TUFT-C) TUFTS COLLEGE; (TUFT-C) UNIV TUFTS

CYC 105

PIA WO 2004041845 A2 20040521 (200438)* EN 66[33]
AU 2003294240 A1 20040607 (200469) EN
EP 1565203 A2 20050824 (200556) EN
JP 2006504852 W 20060209 (200612) JA 35
CN 1732014 A 20060208 (200643) ZH
US 20060205927 A1 20060914 (200661) EN
IN 2005CN01071 P4 20070824 (200780) EN

ADT WO 2004041845 A2 WO 2003-US34684 20031031; US 20060205927 A1 Provisional
US 2002-423046P 20021101; AU 2003294240 A1 AU 2003-294240 20031031; CN
1732014 A CN 2003-80107979 20031031; EP 1565203 A2 EP 2003-789721
20031031; EP 1565203 A2 WO 2003-US34684 20031031; JP 2006504852 W WO
2003-US34684 20031031; US 20060205927 A1 WO 2003-US34684 20031031; JP
2006504852 W JP 2004-550338 20031031; US 20060205927 A1 US 2006-533611
20060511; IN 2005CN01071 P4 WO 2003-US34684 20031031; IN 2005CN01071 P4 IN
2005-CN1071 20050531

FDT AU 2003294240 A1 Based on WO 2004041845 A; EP 1565203 A2 Based on WO
2004041845 A; JP 2006504852 W Based on WO 2004041845 A

PRAI US 2002-423046P 20021101
US 2006-533611 20060511